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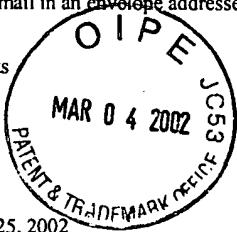
Assistant Commissioner for Patents
Washington, D.C. 20231

PATENT
Attorney Docket No.: 019186-002510US

On February 25, 2002

TOWNSEND and TOWNSEND and CREW LLP

By: Don Miner



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of:

Luby, et al.

Application No.: 09/882,508

Filed: June 15, 2001

For: MULTI-OUTPUT PACKET
SERVER WITH INDEPENDENT
STREAMS

Examiner: Unassigned

Art Unit: 2661

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Gregory E. Stanton
Reg. No. 45,127

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1 of 3

C mplete if Known

Application Number	09/882,508
Filing Date	June 15, 2001
First Named Inventor	Luby, Michael
Group Art Unit	2661
Examiner Name	

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Attorney Docket Number

019186-002510US

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
1.	6,307,487			Luby	10/23/2001	
2.	6,320,520			Luby	11/20/2001	
3.	5,617,541			Albanese, et al.	04/01/1997	
4.	6,073,250			Luby, et al.	06/06/2000	
5.	6,081,909			Luby, et al.	06/27/2000	
6.	6,163,870			Luby, et al.	12/19/2000	
7.	6,195,777			Luby, et al.	02/27/2001	
8.	6,018,359			Kermode, et al.	01/25/2000	
9.	5,371,532			Gelman, et al.	12/06/1994	
10.	5,936,659			Viswanathan, et al.	08/10/1999	
11.	5,379,297			Glover, et al.	01/03/1995	
12.	5,903,775			Murray	05/11/1999	
13.	5,659,614			Bailey, III	08/19/1997	
14.	6,011,590			Saukkonen	01/04/2000	
15.	6,141,053			Saukkonen	10/31/2000	
16.	5,751,336			Aggarwal, et al.	05/12/98	
17.	6,185,265			Campanella	02/06/01	
18.	5,936,949			Pasternak, et al.	08/10/99	
19.	5,835,165			Keale, et al.	11/10/98	

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
20.	WIPO	WO 01/58130	A2		Rajwan	08/09/2001		
21.	WIPO	WO 01/58131	A2		Yosef, et al.	08/09/2001		
22.	WIPO	WO 01/57667	A1		Rajwan, et al.	08/09/2001		

Examiner Signature

Date Considered

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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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Sheet

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of

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Application Number

09/882,508

Filing Date

June 15, 2001

First Named Inventor

Luby, Michael

Group Art Unit

2661

Examiner Name

Attorney Docket Number

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
✓	23.	Wong, J. W., "Broadcast delivery", <i>Proceedings of the IEEE</i> , 76(12):1566-1577, (1988)	RECEIVED APR 01 2002 Technology Center 2600
✓	24.	Viswanathan, et al., "Metropolitan area video-on-demand services using pyramid broadcasting", <i>Multimedia Systems</i> , 4(4):197-208 (1996)	
✓	25.	Aggarwal, et al., "On optimal batching policies for video-on-demand storage servers", <i>Proc. Intl. Conf. on Multimedia Computing and Systems</i> , pp. 253-258, Hiroshima, Japan, (1996)	
✓	26.	Almeroth, et al., "The use of multicast delivery to provide a scalable and interactive video-on-demand service", <i>IEEE Journal on Selected Areas in Communication</i> , 14(6):1110-1122, (1996)	
✓	27.	Dan, et al., "Scheduling policies for an on-demand video server with batching", <i>Proc. ACM Multimedia</i> , pp. 391-398 (1998)	
✓	28.	Bar-Noy, et al., "Competitive on-line stream merging algorithms for media-on-demand", Draft (July 2000)	
✓	29.	Bar-Noy, et al., "Efficient algorithms for optimal stream merging for media-on-demand", Draft (August 2000)	
✓	30.	Eager, et al., "Minimizing bandwidth requirements for on-demand data delivery", <i>Proc. Intl. Workshop on Advances in Multimedia Information Systems</i> , pages 80-87, (Indian Wells, CA, October 1999)	
✓	31.	Eager, et al., "Optimal and efficient merging schedules for video-on-demand servers", <i>Proc. ACM Multimedia</i> , vol. 7, pages 199-203 (1999)	
✓	32.	Aggarwal, et al., "A permutation-based pyramid broadcasting scheme for video-on-demand systems", <i>Proc. IEEE Int'l Conf. on Multimedia Systems</i> , (Hiroshima, Japan, June 1996)	
✓	33.	Hua, et al., "Skyscraper broadcasting: A new broadcasting system for metropolitan video-on-demand systems", <i>Proc. ACM SIGCOMM</i> , pp. 89-100 (Cannes, France, 1997)	
✓	34.	Gao, et al., "Efficient schemes for broadcasting popular videos", <i>Proc. Inter. Workshop on Network and Operating System Support for Digital Audio and Video</i> , (July 1998)	
✓	35.	Juhn, et al., "Harmonic broadcasting for video-on-demand service", <i>IEEE Trans. on Broadcasting</i> , 43:268-271 (1997)	
✓	36.	Juhn, et al., "Adaptive fast data broadcasting scheme for video-on-demand service", <i>IEEE Trans. on Broadcasting</i> , 44:182-185 (1998)	
✓	37.	Paris, et al., "Efficient broadcasting protocols for video on demand", <i>International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS)</i> , vol. 6, pages 127-132 (July 1998)	

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Sheet

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Examiner Name	

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✓	38. ✓	Paris, et al., "A low bandwidth broadcasting protocol for video on demand", Proc. International Conference on Computer Communications and Networks, vol. 7, pages 690-697 (October 1998)
✓	39. ✓	Sincoskie, W. D., "System Architecture for Large Scale Video on Demand Service," Computer Network and ISDN Systems, pp. 155-162, (1991)
✓	40. ✓	Rangan, et al., "Designing an On-Demand Multimedia Service," IEEE Communication Magazine, Vol. 30, pp 5-65, (July 1992)
✓	41. ✓	Ozden, et al., "A Low-cost Storage Service for Movie on Demand Databases," Proceedings of the 20th Very Large DataBases (VLDB) Conference (Santiago, Chile 1994)
✓	42. ✓	Viswanathan, et al., "Pyramid Broadcasting for Video-on-Demand Service", Proceedings of the SPIE Multimedia Computing and Networking Conference, Vol. 2417, pp. 66-77 (San Jose, CA, February 1995)
✓	43. ✓	Viswanathan, S. R., "Publishing in Wireless and Wireline Environments", Ph.D. Thesis, Rutgers; The State University of New Jersey (November 1994)

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